



## *Mosquito Control Options for Municipalities*

### **Background**

West Nile Virus is a disease transmitted by mosquitoes. The most effective way to control mosquitoes and the diseases they can carry, is through a comprehensive, integrated mosquito control program.

### **Control Program**

While an integrated program has many components including surveillance, habitat elimination and public outreach, this document will focus on Wisconsin's requirements related to the use of pesticides to control mosquitoes.

One resource for information on developing an integrated mosquito control program is the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)). Their web site contains a document entitled, "Guidelines for Surveillance, Prevention, and Control." Another resource is your county public health department.

### **Treatment Options**

Municipalities that choose to control mosquitoes using pesticides have two treatment options: hire a pesticide application business or have municipal employees apply pesticides. Either way, there are regulations that must be followed when using pesticides for mosquito control.

### **Commercial Pesticide Applications**

If your municipality hires a commercial pesticide application business, the company and its employees must meet these requirements:

- The commercial business must have a current commercial pesticide application business license issued by the Department of Agriculture, Trade and Consumer Protection (DATCP).
- All pesticide applicators employed by the business must be currently licensed as an individual commercial pesticide applicator.
- All pesticide applicators must be currently certified in Category 5.0 - Aquatic and Mosquito Pest Control or have an approved reciprocal certification from another state. Certification in Category 3.0 - Turf and Ornamental, is not acceptable for mosquito control.

To ensure that you hire certified applicators and a licensed business, visit [www.kellysolutions.com/wi/](http://www.kellysolutions.com/wi/). This Internet-based directory is updated weekly and contains persons certified as commercial applicators in Wisconsin, including those certified to control mosquitoes. You can also search for licensed businesses by city, county or zip code.

You can also contact DATCP at 608-224-4500 to obtain a list of currently licensed commercial pesticide application businesses.

### **Municipal Employee Applications**

If municipal employees apply a pesticide for mosquito control:

- Employees are not required by the state of Wisconsin to be certified unless they use a restricted-use pesticide. Local policy may however, require certification regardless of the pesticide type.
- If a restricted-use pesticide is used, municipal employees must be certified in Category 5.0 - Aquatic and Mosquito Control. Municipal employees must also be licensed as a pesticide applicator but the license fee is waived.

### **Landscape Application Requirements**

The University of Wisconsin Extension Pesticide Applicator Training program provides training and training materials for pesticide applicator certification. For information on training sessions or to order training materials, visit the PAT web site at [ipcm.wisc.edu/pat/](http://ipcm.wisc.edu/pat/) or call 608-262-7588.

If your municipality undertakes a mosquito control program for public health purposes, posting and notification requirements for landscape applications under Wisconsin's pesticide rule ATCP 29, do not apply.

To be effective, pesticides used to control mosquitoes must target different life stages of the mosquito from larva to adult.

### **Adult Mosquito Control Methods**

Adult mosquito control methods include:

- Fogging - works by contact and generally controls adult mosquitoes flying or resting on foliage. This offers short-term relief from mosquitoes but little residual control. A variety of pesticides are used from organophosphates to synthetic pyrethroids. The products are applied by thermal foggers or Ultra Low Volume (ULV) spray equipment where small amounts of pesticides are applied with hand held, truck mounted or aerial equipment.
- Sprays - after application, liquid sprays mostly control mosquitoes resting in foliage, and depending on the pesticide used, also control new mosquitoes entering the foliage for a short period of time. Residual effects usually last from a few days to about a week depending on the product used and rainfall.

### **Larval Mosquito Control Methods**

Larval mosquito control methods:

- Larval control requires that pesticides (called larvacides) be applied to water, the larval habitat.
- Before pesticides can be applied to waters of the state, a permit from the Department of Natural Resources may be required. Contact your DNR district office or visit their web site at [www.dnr.state.wi.us](http://www.dnr.state.wi.us) for permit information.
- Waters of the state means nearly any water body in the state including private lakes and ponds, public lakes, ponds and rivers, streams, marshes and wetlands.
- Larvacides may be liquid, granular or a solid like a briquette.
- Biological larvacides are also available such as different varieties of *Bacillus thuringiensis* (Bt) or insect growth regulators.

### **Community Involvement**

Remind residents and businesses in your municipality of their role in effective mosquito control:

- Eliminate mosquito breeding habitats by emptying standing water in outdoor items such as containers, toys, plastic covers, unused tires or outdoor equipment.
- Drain ponds or puddles or fill with dirt.
- Empty and change the water in bird baths, fountains, wading pools, and potted plant trays at least once a week.
- Properly maintain swimming pools and unclog rain gutters.
- Use mosquito repellents that contain DEET (diethyl-meta-toluamide) and closely follow label directions and precautions.
- Wear long sleeves and long pants if going into areas with high mosquito populations.
- Stay inside in the early morning and early evening when mosquitoes are active.
- Be sure window and door screens are fitted properly and in good repair.

### **Resources**

[Wisconsin West Nile Virus Hotline 1-800-433-1610](tel:1-800-433-1610)  
Information clearinghouse for WNV in Wisconsin.

WNV Disease Fact Sheet - Department of Health and Family Services

[www.dhfs.state.wi.us/healthtips/BCD/WestNile.htm](http://www.dhfs.state.wi.us/healthtips/BCD/WestNile.htm)

Human health information.

Chemical Control of Aquatic Plants and Vegetation - DNR

[www.dnr.state.wi.us/org/water/fhp/waterway/aquaticplantcontrol.shtml](http://www.dnr.state.wi.us/org/water/fhp/waterway/aquaticplantcontrol.shtml)

Permit information to apply pesticides to water for aquatic plant or mosquito control.

American Mosquito Control Association [www.mosquito.org](http://www.mosquito.org)

A scientific/educational, not-for-profit public service association for mosquito control. Phone 732-932-0667 or e-mail [amca@mosquito.org](mailto:amca@mosquito.org).

National Pesticide Information Center [www.npic.orst.edu](http://www.npic.orst.edu)

Provides objective, science-based information about pesticides, including mosquito repellents and insecticides, 1-800-858-7378 or e-mail [npic@ace.orst.edu](mailto:npic@ace.orst.edu).

Pesticides and Mosquito Control - EPA

[www.epa.gov/pesticides/factsheets/skeeters.htm](http://www.epa.gov/pesticides/factsheets/skeeters.htm)

Information on mosquito control methods, pesticides, repellents, other resources.

Centers for Disease Control and Prevention

[www.cdc.gov/ncidod/dvbid/westnile/index.htm](http://www.cdc.gov/ncidod/dvbid/westnile/index.htm)

Extensive information on WNV including prevention, surveillance, and health.

What's Going on with West Nile Virus? Cornell University Center for the Environment

[www.cfe.cornell.edu/erap/WNV/WNVWeblinks.cfm](http://www.cfe.cornell.edu/erap/WNV/WNVWeblinks.cfm)

A comprehensive, annotated, listing of organizations and government agency web sites with West Nile Virus information including resources for the general public.



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